

Catalyst Center Application Exemplars

Executive Summary

To address Utah's critical aviation talent shortage, the LEA proposes an Aviation Maintenance program that transforms the traditional classroom into an operational build and repair station. Over a three-year implementation, students will engage in authentic profession-based learning - building and maintaining an FAA-certified aircraft alongside mentors from partners such as Elemental Aviation, Utah Department of Transportation, and Cornerstone Aviation. This initiative creates a seamless pipeline from high school to A&P licensure and post-secondary programs, providing students with immediate access to high-wage careers (\$75,100 median salary) while supplying the skilled technicians needed to meet the region's 35% year-over-year industry growth.

2.1 Duplication and Innovation

The primary potentially duplicative programs exist at nearby USHE Technical Colleges: Pharmacy Technician (lists.institutions.with.programs), and Electrical Apprenticeships (lists.institutions.with.programs).

Grant funds will be used for innovation without duplication by:

1. Resolving Geographic Access: Funds create local lab facilities and buy specialized equipment in a location where no accessible alternative exists for high school students.
2. Capital Expenditure: Funds will construct the essential facility needed to meet state licensing requirements, a capacity that the existing school lacks.

This strategy ensures funds create access to new or highly specialized, partner-dependent training.

2.2 High-Skill, High-Demand Career Pathways and Labor Market Data

The program funded by the Catalyst Grant will be specifically for the Electromechanical Technology (ET) Pathway. The pathway will encompass required CTE coursework, including Electronics 1 & 2, Engineering Principles, Electromechanical 1 & 2, and CTE Internship. The program is strategically designed to address significant gaps in high-skill, high-demand career pathways by targeting local industrial sectors with critical workforce shortages. The pathway prepares students for careers as operators, technicians, and engineers in electrical, instrumentation, and control systems. These positions are key to the oil and gas and mineral processing industries and align with high-demand occupations such as

electro-mechanical and mechatronics technologies and technicians, and industrial machinery technicians.

The program directly counters the lack of a prepared local skilled workforce in San Juan County. This gap is evidenced by the fact that much of the technical leadership for local industry employers commutes daily from surrounding areas. The ET program fills this void by delivering hands-on training with real-world, industrial-grade equipment and providing instruction and mentorship from active industry professionals to a local potential workforce.

Data from Lightcast confirms the demand and strategic importance of this pathway in the region supporting the decision to focus on electromechanical pathways (Lightcast 4, Lightcast 5). The industry sector of Mining, Quarrying, and Oil and Gas Extraction is the top growing industry in the region and holds the highest employment concentration rate in the county, indicating its critical importance to the local economy (Lightcast 4).

The targeted occupations are considered a regional “hotspot” with regional employment that is higher than the national average for an area this size, and grew 43.1% compared to the national average growth rate of 8.7% from 2020-2024. The median hourly wage for these positions is a competitive \$31.45 per hour (Lightcast 5).

2.3 Alignment with Labor Market Needs

Strategic Design & Gap Analysis: The model is intentionally strand-designed to reverse-engineer a workforce pipeline based on verified regional data, directly addressing the training gap between foundational CTE coursework and employer expectations. While district courses provide necessary book knowledge, the local industry reports a lack of professional durability and applied skills in graduates. The program bridges this divide by serving as the capstone level of the pathway; with foundational prerequisites, the program shifts focus from theoretical learning to direct labor-market alignment, ensuring every strand targets a specific, documented regional shortage.

Strand-Specific Alignment & Resource Gap Solutions: The following table details how each CAPS strand is engineered to fill a specific workforce void (the table was an attachment):

LEA mechanisms used to ensure alignment:

Strand	Workforce Gap Addressed	LEA Outcome & Alignment Strategy
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Health & Medical Studies	Staffing Access: Solves rural regional healthcare staffing shortages by creating local entry points for high-demand roles.	Hiring Conversion: Moves beyond observation to mentorship and hiring conversion, utilizing credential stacking to accelerate entry into the workforce.
Engineering, Automation & Industrial Design	Technical Proficiency: Meets the high demand for autonomous systems and engineering professionals in the manufacturing sector.	Verified Output: shifts focus to "durable leadership" and verifies capstone hiring output, ensuring students can operate in professional engineering environments.

2.4 Alignment with Strategic Plan

[LEA's] vision for a profession-based Catalyst Center aligns seamlessly with the goals outlined in our five-year strategic plan. We have attached several segments of this plan to illustrate alignment. Our strategic plan lays the groundwork for our Catalyst Center planning initiative in Goal #3; Action Step #1 in Career & Technology Education Goals (An annual retreat will be held in January to help plan for the future of CTE Initiatives, pg 49). Because, at its core, the Catalyst Center is a natural extension of the work we have already been doing, the work of our strategic planning committee of stakeholders has already envisioned the foundational work for what will become our Catalyst Center. The intentional shifting of our instructional focus toward helping students build the durable skills they need to succeed in whatever future they choose has already begun. Over the past several years, our administrative leadership and professional development efforts have centered on preparing students not simply for the next class or assessment, but for life beyond school.

Our strategic plan also focuses on improving math and science proficiency (See Goals #2 and #3 of the Academic Proficiency Section, pp 28-30). A profession-based Catalyst Center provides an authentic context in which students can strengthen essential academic skills in math and science while simultaneously developing critical thinking, independence, and resilience. When students engage in real-world projects connected to real professions, math and science stop being abstract concepts and instead become practical tools. Students see how data analysis informs decision-making, how scientific principles solve tangible problems, and how precision and accuracy matter in meaningful ways. This

relevance increases engagement and motivation, particularly for students who may struggle to connect traditional classroom instruction to their future goals.

The Catalyst Center will also deepen alignment with the ReDesign's Future 9s Framework, which has been adopted as part of our strategic plan. Through inquiry-driven, project-based learning, students will practice research, problem-solving, and independent work—skills embedded within the Future 9s and essential for long-term success. Goal #1 in the Continuous Development Section of the Strategic Plan (Build Resilience, Autonomy and Engagement, pg 12) we outline our commitment to engaging students in authentic research, working with experts in the community, and making contributions through their projects. Working alongside mentors from professional fields, students will learn how to ask thoughtful questions, revise their thinking, and persevere through challenges. These experiences help cultivate critical thinking while reinforcing the habits of mind required in both academic and professional settings.

3.1 Implementation Timeline

2025–26 (Planning & early purchasing)

- Convene partners.
- Confirm CE courses and program sequence.
- Identify and order long-lead aviation simulators and key equipment.
- Draft footprint/layout for the future aviation lab and mechanics area (in vacated space).
- Begin community and student outreach about the upcoming program.

Spring 2027 (Facility transition)

- The new district-funded CTE building is completed.
- Existing CTE programs move into the new facility.
- The vacated CTE space (old building) is designated for aviation.

Summer 2027–Spring 2028 (Renovation & setup)

- Renovate the vacated space into a flight simulation lab and a small aviation maintenance area.
- Install simulators, tools, power, data, and safety systems.
- Finalize CE approvals, schedules, and teacher training.

Fall 2028 (Full implementation)

- Launch the CE Aviation & Aviation Maintenance pathway.
- First student cohort uses the new lab and mechanics area.

2028–June 30, 2029 (Refinement & scale-up)

- Adjust the curriculum based on feedback.
- Strengthen concurrent enrollment, airport site visits, and WBL placements.

Engineering

2025 (Planning & purchase)

- Work with industry partners to select specific machines.
- Purchase and install machining equipment in the existing Engineering lab.
- Develop machining-focused projects and safety procedures.

2025–26 (Integration)

- Introduce machining units into current Engineering and Robotics courses.
- Align projects to postsecondary institution's expectations.
- Begin small-scale WBL/apprenticeship experiences with RAM.

2026–June 30, 2029 (Full implementation & improvement)

- The Machining-enhanced Engineering pathway runs each year with growing enrollment.
- Ongoing refinement based on employer and postsecondary feedback.

3.2 Learning Experiences

Instruction is delivered through profession-based learning experiences with students engaging in real workplace activities led by current industry specialists, including onboarding industry clients, managing real projects, developing action plans and timelines, producing deliverables to client specifications, incorporating client feedback, and completing final delivery and presentation using industry workflows and documentation. Courses in our identified pathways require students to complete tool, equipment, and environment safety qualification prior to independent work using tools or equipment and/or follow safe and professional practices and procedures. Students will do so with industry-approved PPE where applicable and in an environment that replicates a real work environment. Enrollment in advanced pathway coursework follows established CTE prerequisites where applicable and others have performance skills aligned to industry. These performance skills are demonstrated through completion of real-world projects for industry clients, with students producing deliverables and managing all client interactions including intake, onboarding, planning, project management, evaluation, and showcase. These learning experiences occur in environments that replicate professional workplaces and, where applicable, operate as functioning production spaces rather than traditional

classrooms. Classroom culture is distinguished from traditional instruction by holding students accountable to external client quality standards and enforcing production-driven timelines. Student performance and project timelines will be evaluated against external industry and client expectations. Instructor roles will be focused on modeling industry standard best practices, coaching, supervision, and quality control rather than lecture-based delivery.

3.4 Industry Tools and Technologies

The integration of industry-standard equipment is central to the profession-based learning model:

- **Simulation Labs:** The proposed lab space will be equipped with high-fidelity simulators that mimic real-world clinical scenarios.
- **Acquisition Strategy:** The Center will actively solicit and utilize retired equipment from our industry partner ensuring students train on tools and technologies that reflect current industry standards and methods.

3.5 Utah Durable Skills and Industry Standards

Utah's durable skills framework emphasizes adaptability, collaboration, communication, innovation, leadership, and professionalism. Students develop these through profession-based projects where the stakes are real. When a team of engineering students prototypes a drone for an industry partner, they practice collaboration by dividing responsibilities, communication by presenting progress to mentors, and adaptability by revising designs based on feedback. When culinary students run a catering event for an actual client, they practice professionalism by meeting service standards and leadership by managing their team through prep and execution.

Leadership gets particular emphasis. Each program builds in opportunities for students to lead projects, coordinate teams, and present to professional audiences. Career and Technical Student Organizations like HOSA, SkillsUSA, and TSA provide additional leadership development through chapter officer roles, competition teams, and service projects.

Industry standards are maintained through Advisory Team oversight and instructor expertise. 89% of our teaching staff come directly from industry and continue working in their fields. They know current workplace expectations because they still operate under them. Advisory Team members review curriculum and equipment every other month to ensure programs reflect how their industries actually work today, not how textbooks described them five years ago.

3.6 Industry Mentorship and Involvement

In addition to the established partnerships and PBL model, this project will add a cross-disciplinary ecosystem where students engage in authentic, industry-driven projects that demonstrate how diverse skills and professions work together. New partnerships will include the following:

- **School of Business:** Flexible space integrating business, marketing, AI, and Data Analytics. Students engage in management-focused projects through the Entrepreneurship Association (EA) and receive one-on-one mentorship from local business owners.
- **First Community Bank Branch (pending approval):** Students rotate through authentic finance roles in a fully operational bank, staffed by a full-time bank employee, gaining mentorship in real-world financial operations.
- **School of Manufacturing:** Welding, composites, machining, aviation maintenance, and engineering programs will allow for intentional collaboration. Industry partners, provide projects that mirror real-world manufacturing workflows, such as prototyping, fabrication, design sprints, and production runs.
- **AI Lab:** With support from industry partners and developing partnerships with USHE institutions, the AI Lab will offer experiences in Security+ prep, prompt engineering, and bot development.
- **Protective Services:** Expanded opportunities for shift shadowing, structured mentorships, internships, and court-based mock trial projects guided by sitting judges.

3.7 High-Quality Instruction

All instructors will be onboarded according to profession-based learning tenets including professional skills development, responsiveness, entrepreneurial mindset, self-discovery and exploration, and equity and access. Instructors will participate in professional development yearly, which provides collaborative professional learning focused on the implementation and continuous improvement of profession-based education models. We will also host yearly profession-based learning events in which industry partners provide pathway-specific training for instructors. During these events, industry partners will demonstrate how profession-based learning is implemented within their respective industries, including project workflows, quality standards, tools, and current industry practices. These sessions will help instructors remain current with industry developments relevant to their programs.

3.8 Advisory Board

Proposed Composition & Industry Representation: To ensure the program remains market-responsive rather than just academically compliant, the program has assembled a high-level Advisory Board. This body moves beyond general community members to include specific decision-makers from the region's primary economic drivers. The composition balances educational leadership with "Workforce Experts" from each of the strands:

The list included individual names with the company they represented for each strand;

4.1 Partnerships and Letters of Collaboration

The Center offers a variety of partnership opportunities, meeting businesses and community members where they are and creating avenues that align with their specific goals and needs that, in turn, serve students. Prominent partners integral to the success of include [list of partners] and many others who have contributed financially, provided mentorship and projects, or served on advisory committees.

Many of these partnerships will grow in the future. For example, [list specific examples]. Through the new facility and programming, we aim to broaden the ways we collaborate with both current and new partners. The additional programs offered will increase relevance for industry partners and open doors to building new relationships. See [partnership list] for current and new partners and letters of support.

4.2 Industry Relevance and Alignment

Industry partners play a central role in keeping our programs current and responsive. By involving them in curriculum planning, mentoring, and project evaluation, we ensure that instruction aligns with workforce needs and emerging industry trends. This approach also prevents unnecessary duplication of programs, facilities, or equipment—our partners help identify gaps and opportunities rather than replicating existing offerings. For example—students have been working on professional based learning projects rather than the simple project-based learning they were used to before. Our current one-day 8th grade job shadow is not enough for students to get a glimpse into the world of the real-life job force.

The close alignment with technical colleges and industry ensures that students experience a seamless transition from high school into further education or employment. Articulated pathways, dual credit opportunities, and internship placements are central to our model, reducing barriers and accelerating student progress toward meaningful careers.

4.3 LEA CTE Director Collaboration

The CTE Director led the development of this proposal, aligning equipment purchases with workforce needs, reviewing program design, and ensuring sustainability through CTE WPU funding.

5.1 Proficiency Metrics

Student proficiency will be measured using a multi-dimensional framework that evaluates academic, technical, and durable skills, all aligned with industry standards and workforce expectations.

Academic and Technical Skills will be assessed through CTE completer status, earned industry certifications, and competency-based performance assessments that verify mastery of pathway standards. Durable Skills will be measured using structured self-assessments and instructor evaluations using the Durable Skills rubric (see attached). Additionally, project deliverables and presentations are reviewed by industry partners to evaluate whether students demonstrate professional readiness and workplace behaviors. Finally, student proficiency will be measured through project-based assessments evaluating quality, accuracy, and professional standards. Metrics include project completion, adherence to industry processes, teamwork effectiveness, and problem-solving outcomes.

Together, these metrics provide a clear, measurable picture of student proficiency, tracking both technical mastery and professional readiness to ensure students can successfully transition to postsecondary programs or high-demand regional careers.

5.2 Career Pathways and Measurable Outcomes

The project is aligning measurable student outcomes with the First Credential program. Our goal is for 100% of students to graduate having achieved at least one of the following outcomes: an industry-recognized credential, concurrent enrollment credit, CTE pathway completion, participation in work-based learning experiences (including internships, externships, or registered apprenticeships), and a professional portfolio demonstrating technical proficiency and durable skills.

Through this project, we are increasing access to concentrator and completer courses for students pursuing CTE programs in [list of programs]. This enables more students to earn CTE Pathway Completion status.

Currently, we offer 16 unique industry certifications. Upon completion of the project, we expect to offer 23 certifications—an increase of 44%. Industry-recognized credentials aligned to the expanded pathway offerings include [list of credentials].

In partnership with USHE institutions, we are working to establish concurrent enrollment opportunities where transfer agreements exist and identify additional areas for alignment to support student transitions and completion of CE courses toward earning their first credential. For details on CE credit offerings and transfer agreements, see the attachment.

Students are developing skills that prepare them for internships, externships, and apprenticeships. The project is strategically identifying students who are ready for industry opportunities. Our LEA anticipates placing 15% of our students in internships. Additionally, through alignment with USHE, students can earn transferable credit toward apprenticeship programs in machining, plumbing, and electrical.

With the completion of this project, the number of students graduating with a professional portfolio and workforce-validated outcomes will double—significantly increasing the district’s pipeline of career-ready graduates.

5.3 Leadership, Postsecondary Progression, and Engagement

The campus will serve as a powerful hub for leadership development, postsecondary readiness, and profession-based learning for students. Its design intentionally blends advanced technical training with opportunities for students to lead, serve, and engage in authentic industry experiences that build confidence, competence, and career direction. Students will develop leadership capacity through multiple structured pathways:

- Career and Technical Student Organizations (CTSOs): CTSOs offer students opportunities to take on officer roles, manage team projects, prepare for competitions, and lead service initiatives—all of which build durable leadership skills with an entrepreneurial mindset.
- Covey Leadership Integration: The project incorporates Covey’s Life-Ready Curriculum into project planning, school planning and leadership, and classroom routines. Students will learn goal-setting, self-management, collaboration, and ethical decision-making as core habits woven into the culture of the building increasing purpose and engagement.
- Professional Industry Entry tools: Students will all have a digital portfolio and LinkedIn showcasing their leadership experiences, postsecondary education, service internships, and capstone projects when they graduate.
- Student Ambassadors Program: Selected students will serve as ambassadors supporting outreach to middle schools, assisting with tours, mentoring peers, and representing the center at district and community events. This role builds confidence, communication, and professionalism.

- **Hosting Leadership and Academy-based Conferences & Events:** The project will serve as a venue for regional CTSO leadership conferences, leadership workshops and visits, K-8 school visits, and student-led summits focused on specific Academies. These events will give students opportunities to present, organize, and facilitate.
- **Service Internships:** During 10th or 11th grade students will participate in Service Internships. Service, as a core Utah value, reinforces leadership, empathy, civic engagement, and responsiveness.
- **Guided Capstone Projects:** These are authentic, extended hands-on learning experiences business partners act as real “clients” and students work in real-world environments.
- **CTE Summer Camps:** Students will help teachers with CTE Summer Camps that will be offered for students in grades 6-9 creating moments to remember in a range of CTE Academies and inspiring younger students to potentially attend.
- **Campus Credentials:** Students will have the opportunity to earn micro-credentials within each Academy. These credentials can jumpstart entry into a field of work and prepare students for postsecondary coursework.
- **Credit Articulation:** Students will not just be taking high school classes, they will be maximizing their time by taking courses that count for credit at USHE institutions.

Budget

Make sure the budget spreadsheet and the Utah Grants budget aligns with each other and the budget narrative. This is a non-example.

Example: The applicant did not utilize the budget spreadsheet template and instead included their own version. Utah Grants indicated that salary expenses were \$78,000. Their spreadsheet indicated that salaries were \$82,000. Employee benefits, travel, and supplies and materials all differed.

Showing 1 to 10 of 10 records

#	Expense Type (Expense Code)	Proposed Budget Amount	Actions
1	Salaries (100)	\$78,000.00	
2	Employee Benefits (200)	\$4,000.00	
3	Purchased Professional & Tech Services (300)	\$0.00	
4	Purchased Property Services (400)	\$0.00	
5	Other Purchased Services (500)	\$0.00	
6	Travel (500)	\$1,500.00	
7	Supplies and Materials (600)	\$16,500.00	
8	Property Including Equipment (700)	\$0.00	
9	Other (Not eligible for Indirect Cost) (800)	\$0.00	
10	Indirect Cost	\$11,070.00	

Line Item	Description	Justification	Grant Fund Request
Personnel Pay/Stipends	Pay and Stipends for Catalyst Coordinator and up to 3-5 CTE teachers (Summer 2026) for curriculum design and planning.	Compensation for ongoing efforts through the year of key staff to lead coordination efforts, manage student portfolios and all events. Also to attend State CTE conferences (SkillsUSA) and map the high school course standards directly to certificate competencies.	\$82,000
Consultant/Facilitator	Contract with a consultant for a Facility Needs Assessment and Feasibility Study (Q1-Q2).	The consultant will work with Industry Partners to ensure the planned facility design meets industry/postsecondary standards and avoids duplication .	\$11,500
Travel	Mileage/Per Diem for Advisory Board members and district staff for Planning Meetings.	Funds to bring Industry Partners to quarterly Advisory Board meetings to perform site visits and conduct curriculum reviews, which are necessary for stakeholder engagement .	\$2,700
Supplies/Software	Annual SkillsUSA school and student membership, necessary tools and computers, along with license fee for management tools.	This is the primary technology for initial program design and rollout , facilitating the pilot WBL integration and portfolio management. Grant funds are not duplicating an existing platform.	\$2,300
Printing/Marketing	Creation of a formal Implementation Grant Application Document and partner recruitment materials.	Required for the final expected outcome of the Planning Grant: a comprehensive application ready for submission.	\$1,500

Effective Use of Funds and Additional Funding

This grant request will be applied entirely to construction costs. The total construction project cost is estimated at \$40 million, and upon award of the state grant, the School District Board of Education will allocate \$18 million from the District’s capital budget to complete the facility. The Education Foundation will supplement these investments with private contributions, including a confirmed \$1 million donation from an industry partner.

Grant funds will be expended efficiently by aligning construction payments with the established timeline, which places major construction activities in 2026–2027 and 2027–2028. Because construction contracts will be executed immediately following grant approval, expenditures will occur continuously as phases of structural work, lab buildouts, mechanical systems, and safety infrastructure are completed. This sequencing ensures timely drawdown, prevents carry-forward, and guarantees that all grant funds are fully expended prior to the June 30, 2029 deadline.

Sustainability Plan

The program is sustainable because:

- Staffing is supported by CTE funding.
- Equipment has a long usable life and fits into existing support systems.
- The district has established technology maintenance resources.
- Industry partners provide ongoing project and mentorship opportunities.

No recurring grant-dependent costs are created.